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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,917	02/23/2004	Allen N. L. Lau	13527-2	7543

1059 7590 03/21/2007

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EXAMINER	
VU, TUAN A	
ART UNIT	PAPER NUMBER
2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/782,917	LAU ET AL.	
	Examiner	Art Unit	
	Tuan A. Vu	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/6/04;3/24/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed 2/23/2004.

Claims 1-31 have been submitted for examination.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-13 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-13 of copending Application No. 10713024 (hereinafter '024). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

As per instant claim 1, '024 claim 1 also recites 'unpacking the reference application... class files' and 'transforming the reference application... target mobile device' for the method of generating a target application from a Java 'reference application adapted to execute on a reference mobile device', the 'target application configured for a target mobile device'.

As per instant claims 2-13, '024 claims 2-13 also recite the same limitations which are worded substantially in a identical manner.

4. Claims 1-17, and 18-31 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-17, and 25-38, (respectively) of copending Application No.

10975346 (hereinafter '346). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

As per instant claim 1, '346 claim 1 also recites method of generating a target application ('target application configured for a target mobile device') from a Java 'reference application *configured to* (as opposed to *adapted to*) execute on a reference mobile device', the method comprising: 'unpacking the reference application... class files'; and 'transforming the reference application... target mobile device'. Even though '346 claim 1 presents a preamble shuffled in a slightly different word order, the intended semantic therein is identical to that of instant claim 1, the body of '346 claim 1 being identical to that of instant claim 1.

As per instant claims 2-17, '346 claims 2-17 also recite the same limitations, all of which worded in an identical manner.

As per instant claim 18, '346 claim 25 also recites a system for transforming Java reference applications ... target mobile device', comprising a transformation engine, a *device plug-in* (which equivalent to claim 18 *plug-in*) the plug-in comprising instruction file and selected software code, 'wherein the transformation engine is adapted to access ... the selected software code'.

As per instant claims 19-31, '346 claims 26-38 also recite the same limitations, all of which worded in an identical manner.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 18-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a " useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

Specifically, claims 18-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result.

Claim 18 recites a system adapted to execute applications, comprising a transformation engine, a plug-in interacting with an instruction file to modify portion of a software code. From the Specifications, the transformation engine is a Java application (para 0022 pg. 5), and a plug-in is known to be software; hence the system claim amounts to listing of software elements with software functionality without providing support of hardware components or hardware embodiment. Thus, the claim does not reasonably convey that the recited software elements are able to perform any physical transformation, absent any hardware to carry out their functionality. As a whole, the claim amounts to listing of non-practical entities, i.e. insufficient to yield a final non-abstract result in terms of concrete, useful, and tangible result as required by the Practical Application Test; and is rejected for leading to a non-statutory subject matter. Claims 19-31, for not remedying to the hardware deficiency, are also rejected as non-statutory subject matter.

The following link on the World Wide Web is for the United States Patent and Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-8, 10-15, 18-21, 24-28, 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ryzl, USPuBN: 2003/0236657 (hereinafter Ryzl).

As per claim 1, Ryzl discloses a method of generating a target application from a reference application, the reference application being a Java application adapted to execute on a reference mobile device (see para 0047-0049, pg. 4), the target application being configured for a target mobile device, the method comprising:

unpacking the reference application into a plurality of class files (see para 0051, pg. 5 – Note: unpacking kjva.jar of a EE interface package - see para 0047, pg. 4 – to change the looks into a configuration 70, Fig. 10 reads on unpacking a reference application of the EE);

transforming the reference application into the target application by a plug-in (see *pluggable architecture* – para 0046, pg. 4, para 0073, pg. 6; para 0060-0061, pg. 4; para 0066-0068, pg. 4 - Note: pluggable architecture and J2ME Apis reads on pluggable APIs in a wireless Java tool – see Fig. 9 -- for unpacking jar and for packing jar file to support MIDP and DoJa) ,

wherein the plug-in is adapted to transform a plurality of different reference applications into a corresponding plurality of target applications (See Fig. 20 – Note: EE default interfaces plus corresponding *Properties/Class* to be changed via the IDE tool into counterparts in a Emulator Configuration – see Fig 10-11, 15-17; Fig. 20 – reads on transforming reference applications into corresponding target applications) for a predetermined combination of the reference mobile device and the target mobile device.

As per claim 2, Ryzl discloses wherein the reference application is in bytecodes during the transformation step (see Forte™ for Java™ - Fig. 10; *J2ME ...verification step... bytecode*, para 0006, pg. 1 – Note: J2ME, CLDC and KVM – para 0013-0018, pg. 2 – reads on wireless environment where package of Java are unpacked for integration by a Java tool that treats Java classes for interpreting, and executing via dynamic JVM compilation with code verifying of mobile emulator, hence handling Java bytecodes – Refer to 'interpreter ... mobile device ...runs as an emulator' of Instant Application, BACKGROUND, para 0008, pg. 2 or Admitted Prior Art).

As per claims 3-4, Rizl discloses wherein the plug-in comprises an instruction file (e.g. *MIDP ... configuration file* – para 0047, pg. 4; *properties file* – para 0051, pg. 4; *MIDP specification, adContent file* – para 0068, pg. 5; para 0071, pg 6) and at least one library (e.g. /lib/ext directory – para 0051, pg. 4; *set of libraries* – para 0013-0014, pg. 2), wherein the transformation step comprises the instruction file instructing a transformation engine to modify a portion of the reference application with a selected software code stored in the library (e.g. Fig. 15-17; para 0071, pg. 6; Fig. 10; para 0073, pg. 6), wherein the portion of the reference application is not supported by the target mobile device; wherein the transforming step

comprises modifying at least one of a plurality of class files (e.g. para 0070, pg. 6; para 0047-0048, pg. 4; Fig. 15-16) in the reference application.

As per claim 5, Rizl discloses adding a new class file (e.g. AddataObject - step 190 – Fig. 20) to the reference application (Note: addObject to a default Emulator to obtain a changed Configuration 70 reads on *addind a new class*) .

As per claim 6, Rizl discloses one action selected from the group of: adding a new method, renaming an existing method, replacing a first object method call with a second object method call, replacing the first object method call with a static method call, renaming a constant pool entry, and inserting a new inner class to an existing class (see Fig 15-17; refer to claim 5; *cut, copy, paste, delete, rename, save* -- para 0070, pg. 6).

As per claims 7-8, Rizl discloses saving the target application to a computer readable medium (step *ST144*, Fig. 17); and further comprising repeating step (a) and step (b) to transform the plurality of different reference applications into the plurality of corresponding target applications (See Fig. 20 – Note: pluggable architecture-based IDE tool by which EE default interfaces plus corresponding *Properties/Class* to be changed via the IDE tool into counterparts in a Emulator Configuration – see Fig 10-11, 15-17; Fig. 20 – reads on transforming reference applications or plurality thereof into corresponding target applications or plurality thereof).

As per claims 10-11, Rizl discloses repackaging the target application into executable code (e.g. J2ME Wireless Compiler 184 – Fig 20; ST120 – Fig 14) wherein the repackaging step further comprises obfuscating (JAR – Fig. 17;) the target the class files of the target application.

As per claim 12-13, Rizl discloses pre-verifying the class files (e.g. ST116 – Fig 14) of the target application; wherein the target application is a non-Java application (e.g. different applications types … in a seamless manner – para 0049, pg. 4).

As per claims 14-15, Rizl discloses unpacking a JAR file (see para 0051, pg. 5 – Note: unpacking *kjva.jar* of a EE interface package - see para 0047, pg. 4 – to change the looks into a configuration 70, Fig. 10 reads on unpacking Jar of a reference application of the EE) of the reference application; and breaking an immutable image from the reference application into a plurality of smaller images (e.g. para 0018, pg. 2 – Note: unpacking a archive image reads on breaking it into a plurality of smaller images).

As per claim 18, Rizl discloses system for transforming Java reference applications adapted to execute on a reference mobile device into corresponding target applications configured for a target mobile device, the system comprising:

a transformation engine; and a plug-in (see *pluggable architecture* – para 0046, pg. 4, para 0073, pg. 6; para 0060-0061, pg. 4; para 0066-0068, pg. 4) comprising:

an instruction file (e.g. *MIDP ... configuration file* – para 0047, pg. 4; *properties file* – para 0051, pg. 4; *MIDP specification, adContent file* – para 0068, pg. 5; para 0071, pg 6); and

a selected software code adapted to modify a portion of the reference application not supported by the target mobile device (e.g. Fig. 10; Fig 15-17; refer to claim 5; *cut, copy, paste, delete, rename, save* -- para 0070, pg. 6); wherein the transformation engine is adapted to access the instruction file, the instruction file being adapted to direct the transformation engine to identify the portion of the reference application and to modify the portion with the selected software code (e.g. *MIDP ... configuration file* – para 0047, pg. 4; *properties file* – para 0051,

pg. 4; *MIDP specification, adContent file* – para 0068, pg. 5; para 0071, pg 6) and at least one library (e.g. /lib/ext directory – para 0051, pg. 4; *set of libraries* – para 0013-0014, pg. 2).

As per claim 19, Rizl discloses wherein the instruction file comprises an XML file (e.g. para 0069, 0071, pg. 5, 6).

As per claim 20, Rizl discloses that the plug-in tool comprises a library, the library being adapted to store a plurality of the software codes (e.g. /lib/ext directory – para 0051, pg. 4; *set of libraries* – para 0013-0014, pg. 2) adapted to modify a plurality of the portions.

As per claims 21, and 30-31, Rizl discloses that the transformation engine is a Java application (see Forte™ for Java™ - Fig. 10) wherein the target applications are Java applications (JAR classes – Fig. 17; para 0048, pg. 4; para 0066, pg.5) wherein the target applications are non-Java applications (refer to claim 13)

As per claims 24-26, Rizl discloses wherein the selected software code comprises a new method adapted for insertion into the reference application (re claims 5-6); wherein the selected software code comprises a static method call adapted for insertion into the reference application (e.g. para 0068, para 0070, pg. 5); wherein the selected software code comprises a new method name adapted to replace a method name in the reference application (re claim 6).

As per claims 27-28, Rizl discloses a new object method call adapted to replace (e.g. *rename* – para 0070, pg. 6; *change ... existing types* – para 0049 – Note: Java™ pluggable architecture Forte – see Fig 10 -- equipped with GUI editing tool to replace existing applications reads on Java method call to replace an object) a method call in the reference application; a new class fileadapted for insertion into the reference application (para 0066-0068, para 0070, pg. 5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was was made.

10. Claims 9, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable under Ryzl, USPuBN: 2003/0236657.

As per claim 9, Ryzl does not explicitly disclose selecting a predetermined plug-in from a plurality of the plug-ins, the predetermined plug-in corresponding to the predetermined combination of the reference mobile device and the target mobile device, each of the plurality of the plug-ins corresponding to a different combination of the reference mobile device and the target mobile device. However, Ryzl teaches constant checking of jar file content to verify whether classes have been modified or still up-to-date to create the final Jar package (see para 0061-0063, pg. 5) based on some predetermined manifest/descriptor information (see Fig. 11, 14) or properties for a target mobile application based on the default configuration. The selecting and finally including of appropriate class for a given determined descriptor file entails a need to select not only class and method or properties but also the correct APIs or plug-ins to verify or retrieve such required objects as needed for the J2ME application (see Fig. 20; *getAPIClassPath* - para 0047, pg. 4; *API ... profile ... meet the needs* – para 0016, pg 2). It would have been obvious for one skill in the art at the time the invention was made to implement the pluggable architecture by Ryzl so that it includes feature so as to enable selective (or as-

needed) retrieval of plug-in APIs because these pluggable APIs being predetermined to support the retrieval, verification, and editing of objects being included in the final Jar package would enable the pluggable architecture of Ryzl's platform to dynamically effect call or invocations to integrate an application on a efficient basis approach which is contemplated for a mobile endeavor (see J2ME, KVM, CLDC, MIDP, pg. 2), concerning which only suitable APIs would be needed to support a resource-constraint device (see para 0011-0013, pg 2).

As per claim 29, Rizl discloses a plurality of the plug-ins, each of the plurality of the plug-ins corresponding to a different combination of reference and target mobile device (e.g. para 0046, pg. 46; APIs para 0059-0063, pg. 5), but Ryzl does not explicitly disclose wherein the transformation engine is adapted to choose a selected one of the plug-ins corresponding to the different combination; however this selecting limitation has been addressed in claim 9 above.

11. Claims 16-17, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable under Ryzl, USPuBN: 2003/0236657; in view of Byman-Kivivuori et al., USPubN: 2004/0002305(hereinafter Byman)

As per claims 16-17, Rizl does not disclose wherein the transformation step comprises inserting an interception module into the reference application, wherein the interception module is adapted to intercept key events; wherein the transformation step comprises inserting a conversion table into the interception module, wherein the conversion table defines key-mapping from the reference mobile device to the target mobile device. Rizl discloses emulator interface with default properties and a IDE tool to implement a target configuration via modifying the default properties of the emulator interface (see Fig.0047-0059, pg. 4-5; Fig. 11-13) in an integration and editing tool to implement executable application or interface properties according

to a CLDC target. It was well-known that keypad function layout (and thereby patterns of keyboard input/event) varies from one mobile device from one manufacturer to the next; and this is specified in a CLDC enabling a porting between platforms or different commerce applications; and such is suggested in Rizl's mention of the cellular phone expansion and their constraint in graphical capacity (Rizl: para 0011, pg. 2) with regard to which J2ME/CLDC provide as specification profile to support this mobile interface format integration (see *implements EE interface* – para 0051-0053,pg 4; Fig. 15) to resolve interface differential as set forth above. In a wireless network to provide WAP applications to mobile devices with deployment of JAR, class bytecodes based on a RFID or tags of a descriptor XML format file (Byman: para 0057, pg. 6) similar to the integration tool by Rizl, Byman discloses that the descriptor tags can designate the GUI elements including digits of a keyboard, such interface input susceptible to be replaced or augmented (Byman: para 0097-0098, pg. 11) and/or serve as indicative events that can be emulated via a descriptor tag for addressing a user request. In view of the descriptor-based mobile GUI-interface modification from one emulator configuration to a target configuration set forth above (Rizl: Fig.0047-0059, pg. 4-5; Fig. 11-13) in light of the J2ME^{tm} browser application (Rizl: J2ME … web page … awt.frame – para 0005, pg. 1) by Rizl, it would have been obvious for one skill in the art at the time the invention was made to provide Rizl's IDE tool with pluggable APIs to enable description of the key mapping or detection of keypad touching event as taught by Byman to handle differentials in mobile device manufacturer model user-input interface or request as concerned by Byman's descriptor emulation scheme. One would be motivate to provide event intercepting module/API into this IDE tool by Rizl to learn about the key input by the user given identification for each key as taught by Byman, and

based on such key-mapping in view of the Byman's predefined descriptor or tags, handle the request of the user based on such keyboard touching event and learn from the descriptor mapping appropriate keyboard format pertinent the target mobile station in order to deliver appropriate services or deployed assets to the user as set forth by Byman (Byman: para 0048, 0053-0054, pg. 5-6)

As per claims 22-23, refer to rejections of claims 16-17 as set forth above.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan A Vu
Patent Examiner,
Art Unit 2193
March 18, 2007